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ENVIRONMENTAL IMPROVEMENTS WITH URBAN DEVELOPMENT: FALSE CREEK, VANCOUVER, CANADA

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ENVIRONMENTAL IMPROVEMENTS WITH URBAN DEVELOPMENT

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ENVIRONMENTAL IMPROVEMENTS WITH URBAN DEVELOPMENT: FALSE CREEK, VANCOUVER, CANADA

A B S T R A C T

In response to public pressure to upgrade the environment, three government agencies undertook redevelopment responsibilities for a 150 hectare derelict industrial area ajacent to downtown Vancouver. This project is widely regarded as a major sucess in environmental improvement. A review of the 20 year redevelopment process, and the results of this process in achieving unique public objectives, identifies five requirements critical to success. These key elements include: consolidated ownership, suitable time frame for project scale and context, extensive government commitment, process flexibility, and continued intergovernmental cooperation. Standards of environmental quality became more restrictive as the project proceeded, significantly influencing both cost and development decisions.

Introduction

As a city's population increases and the city matures, it is normal that growth patterns include both expansion at the periphery as well as redevelopment of the inner core. When this growth related redevelopment is accompanied by an increase in economic activity, the pace of redevelopment may be accelerated and widely spread. In North American cities, this "urban renewal" process of the 1950's and 60's often

replaced decaying low density residential areas with high density subsidized family housing projects that were fraught with problems.

The core area of Vancouver, British Columbia, provides a Canadian example of a young city -a century old - that experimented with a redevelopment program to establish residential and commercial uses in the inner city on the deteriorating industrial areas of False Creek. Although the provision of subsidized housing eventually became a feature of the False Creek redevelopment it was secondary to a new type of initiative that appeared in the 1960's in North America, and which is still gaining momentum. The primary motive in the revitalization of the False Creek area grew out of early manifestations of a widespread concern over deteriorating environmental conditions. The basis of the project was a desire to "clean up False Creek."

The urban area of Vancouver is constrained on two sides by the Coast Mountains and the Pacific Ocean. The downtown core is located on a 1200 hectare peninsula bounded on the south by False Creek, a three kilometre long, narrow, tidal inlet connected at its western end to English Bay where the heavily utilized beaches provide an important recreation amenity for city residents. False Creek was originally three times its present size. The mudflats at the east end were filled in over the years and today, the water area of the Creek is 150 hectares. The land area of the basin that is commonly referred to as False Creek is only 200 hectares.

Settlement in Vancouver began 100 years ago at the end of the transcontinental railway that terminated on the downtown peninsula. False Creek developed as an industrial area related to the railway terminus and the tidewater access afforded by False Creek for shallow draft coastal vessels. Industry locating in the False Creek area included saw mills, metal fabricating plants, transhipment yards, truck yards, coal gas plants and ship yards in addition the railyard. The Creek itself served

as a log storage area as well as a transportation corridor.

To City officials, False Creek was seen as an obstacle to expansion due to the high costs of bridging. It did, however, offer a convenient channel for sewage and stormwater.

In the late 1960's, the political and economic decision making structure in North America was undergoing a considerable change. The general public was becoming concerned with environmental quality. An individual's ability to influence decision making was increasing particularly at the local level. Perceptions of acceptable cityscapes were changing and the governments of the day were under pressure to ensure that redevelopment in the city was undertaken for the benefit of the residents of the city. A self image of the City of Vancouver as an outstanding physical and social environment was also emerging.

An outgrowth of these changing attitudes was a public desire to be involved in the planning and development approval processes. This demand for more public involvement has led to a present day situation where formal Public Hearings are held on all planning proposals in Vancouver, and extensive public consultation during policy formulation activities is the norm.

In the two decades since 1968, government agencies acquired the land in False Creek with redevelopment intentions with unique public objectives. Today, more than 60 percent of the former industrial area of False Creek has been redeveloped and it provides an excellent opportunity to examine a redevelopment process which included from the outset, a concern for improving environmental quality.

The government developers cleared the site of the former industrial uses, obtained the necessary regulatory approvals for redevelopment, provided the required servicing, roadways and parks, and created smaller parcels for private sector development. The process by

which these government developers obtained approvals and acquired funding, generally featured extensive public involvement in the planning process. The process exhibited a great deal of variation and, in most instances, was sufficiently flexible to accommodate a wide variety of objectives and respond to changing economic and political conditions.

As part of the global tendency toward "privatization", and the decline of public sector development activity, within the last six months large portions of the remaining area of False Creek have been sold to a private developer who intends to continue the redevelopment process.

1 The Need for Action

By the late 1960's, the industrial sites in False Creek were surrounded by residential and commercial uses, and public attention was focusing on the quality of the environment in the inner city. The derelict and deteriorating industrial operations of False Creek were seen as a highly visible eyesore that required cleaning up in order to create the image of a modern city.

The focus of the regional industries was shifting. Forest related industries were relocating to other areas, closer to their log supplies. Other industry moved to suburban locations, motor carriers replaced rail transport. Ship building and metal fabricating industries that had developed during the war were no longer able to compete successfully, and disappeared. The remaining outdated plants spewed industrial wastes into the atmosphere and the waters of False Creek.

Ownership of land in False Creek was concentrated in few hands. Although the Provincial government owned by far the largest area, it had leased its land on the south shore and water lots to the Canadian Pacific Railway. This lease was up for renegotiation in 1971 and the uncertainty associated with lease renewal

contributed to the decline of the industrial area. Between the Granville and Cambie Bridges on this leased land, only a few short-term leases remaining.

The south shore between Granville and Cambie Bridges, part of the Provincially owned land, had become a wasteland with only a few short-term leases remaining.

To the west of False Creek on the downtown peninsula, a single-family dwelling neighbourhood had been redeveloped during the early 1960's into high rise apartment blocks, and this had absorbed much of the population growth of the City during the previous decade.

Frequently, during the twentieth century, new schemes for the redevelopment of False Creek had been proposed. In the 1920's, plans were conceived to create a deep sea harbour with docks and rail terminals. After World War II, several proposals emerged for False Creek ranging from a plan to fill in the entire waterbody, to dredging a more navigable waterway. In 1966, a student proposal to create a large park in the area helped foster a public debate over future land use.

A decision by the Port of Vancouver to develop additional deep sea port facilities at Roberts Bank near the US border effectively ended any thoughts of False Creek as a deep sea port.

In 1967, the CPR and the Province agreed to a land exchange consolidating the Province's holdings on the south shore and the railway's on the north shore. The Province's 34 hectare holding on the south shore was soon acquired by the City of Vancouver, which now controlled all of the land on the South Shore of the Creek. Granville Island was owned by the National Harbours Board, a Federal agency. The CPR owned both the upland and the foreshore on the North Shore. The Provincial government still owned the bed of the Creek as well as some parcels at the northeast corner of the Creek.

In 1968, CPR announced a plan for the redevelopment of its property on the North Shore of False Creek. This plan called for the development of a high rise apartment complex that would contain 11,000 units. The Vancouver Planning Department had already begun a study of redevelopment options for the entire False Creek Area,and the CPR announcement underlined the need for an area wide policy plan. At this point, during the late 1960's, there was a growing agreement on the desirability of cleaning up False Creek. What the area would become was subject of heated debate among three levels of government, public sector agencies, special interest groups and individual citizens. The significant shift in perspective to note, was that the False Creek area was no longer seen as a problem, but represented an opportunity.

2. Strategy Formulation

The public pressure for the upgrading of the False Creek environment culminated in government action leading to redevelopment of the site. As might be expected, the initial response came from the municipal government, the level most susceptible to local public pressure. By 1967, Vancouver City Council was publicly debating the future use of the area. Proposals were put forward to maintain industrial uses, or to redevelop the creek basin with a variety of park and residential uses. A series of reports related to this debate were commissioned by City Council and the debate became public.

Area-wide Policy

In January 1970 the Vancouver City Planning Department issued a brochure outlining five development options for the redevelopment of False Creek. These options became the focus of considerable public discussion and 54 submissions were received in response to the information brochure. Following this public

discussion, the Planning Department prepared a preliminary policy plan for the False Creek Basin that did not include industrial redevelopment. Residential development, similar to that proposed by CPR in 1968, was the key feature of this plan which called for up to 28,000 dwelling units.

When this plan was discussed at Vancouver City Council, a proposal that it incorporate subsidized housing was endorsed by Council. The emerging attitude was that good planning and development control could provide a suitable response to some pressing social issues.

By this time most discussions of the False Creek identified 10 discrete areas. In addition to Granville Island, the city owned South Shore, and the CPR lands, (North Shore) there were smaller, privately held parcels at the eastern and western ends of the Creek.

In early January, 1971, the City of Vancouver established a group of consultants, the False Creek Study Group, under the auspices of the Planning Department, to prepare recommendations and conclusions from research programs and working papers.

The Study Group brought forward a four-part report in September, 1971. Thirty recommendations were made in this report, including 13 that dealt with how the policies should be implemented. This document, in addition to three other reports published in early 1972 relating to the City owned lands on the South shore, were to became the basis of City policies for redevelopment of the Creek. Many of these policies remain in place today.

The recommendations were introduced with, at the time, an untested proposition: *"We believe that in False Creek there is an unparalleled opportunity to conceive, design and bring into being a better place for people to grow, to work and to play . . . . The provision of an environment which does fulfil high expectations can be enormously profitable for the City of*

Vancouver and the people of the Lower Mainland."

This proposition, that the enhancement of environmental quality makes good economic sense, was at the centre of a growing public debate, and provided a major issue for the 1972 municipal election. Although most candidates favoured the redevelopment of the creek there were widely divergent views on land uses, the process of development itself, as well as the role of public agencies in the process.

The election brought in an urban reform group (TEAM) which included several university professors. The election proved to be a major turning point for the redevelopment of False Creek. The TEAM majority advocated managed redevelopment to ensure quality growth that responded to current social needs as opposed to the market driven policies of the previous Council.

Less than one year after the election, City Council approved an area wide policy plan. Key components of these policies dealt with environmental issues of water quality, liveability, noise impacts, community structure and population mix, all deriving from the 1971 consultant recommendations. In the interest of creating a human environment, the plan called for a reduction in parking as dependence on the automobile was forecast to decrease. This plan provided sufficient direction to allow the preparation of specific land use and development control by-laws that would direct the redevelopment.

The False Creek Comprehensive Development District (FCCDD) by-law, a new type of development control, which contained both mandatory and interpretative requirements, became the formal expression of the area wide policies. This by-law was enacted in November 1974. The FCCDD identified targets for population age and income mix that reflected the age and income mix of greater Vancouver. This was interpreted to mean the development would comprise 25 percent non-profit housing

co-operatives, 30 percent non-profit rentals and 45 percent market rental and ownership units. The important environmental regulations in the FCCDD dealt with noise attenuation and other liveability criteria.

Once the area wide policies for the redevelopment of False Creek was complete, Vancouver City Council began redevelopment of the City owned lands on the South Shore.

South False Creek

The City, through Council committees and its Planning Department, adopted a design scheme that included a large park and a medium density family residential neighbourhood as Phase 1 of the redevelopment of the South Shore.

A limited competition was held and the public was invited to participate in the selection process. A review and recommendation committee was appointed by Council that included four citizens with specific development expertise. It chaired by the Director of Planning. The concepts were also reviewed by a 22 member citizens group appointed by the City Planning Commission to investigate and recommend housing options.

Eventually one of the design concepts was selected and a development control by-law called an Area Development Plan (ADP) was prepared.

Granville Island

Industry dominated land use on the Island until the early 70's when options for the Creek came under discussion. The Island was perceived as a marketing and environmental obstacle to the redevelopment of the remainder of the Creek. The City of Vancouver, during its investigations on the future of False Creek, initiated discussions with the National Harbours Board concerning the future of Granville Island.

The redevelopment process for Granville Island got underway in 1973 when the National Harbours Board transferred the administration of the Island to the Ministry of Urban Affairs where it came under the administration of Canada Mortgage and Housing Corporation. In 1975 a document entitled "Granville Island: a process for redevelopment" was published. This document outlined the steps by which the Island could be redeveloped and prescribed an "Island Trust" to manage the redevelopment.

The 1975 proposals for Granville Island used phrases such as "*urban opportunity place*" and "*amenity support area*". The redevelopment would feature adaptive re-use of the existing industrial buildings and create opportunities for public use. This represented a significant departure from conventional redevelopment practice.

In 1977, a detailed Reference Document was prepared by the Island Trust containing the following key objectives:

> *"To be a place of recreation in the fullest sense,*
>
> *To offer a wide variety of activities within the historical character of the Island,*
>
> *To provide ready access to the waterfront, and*
>
> *To provide people of all ages and incomes with a location which is attractive in both a physical and social sense."*

The Reference Document was forwarded to the public for discussion before proceeding to Public Hearing. Displays, wide distribution of an information broadsheet and meetings initiated heated debates. Many written briefs were submitted by such groups as the Real Estate Board, Board of Trade, Downtown Vancouver Association and Save Our Parkland Association and considerable controversy ensued

Association and considerable controversy ensued over both the desirability of the proposals and the likelihood of their success.

Despite the concerns that emerged in the local public forum, the Trust felt encouraged and determined to proceed with its plan. Its creator, architect Norman Hotson won the 1977 Canadian Architect Award of Excellence for the redevelopment scheme; the Provincial Government indicated support by agreeing to locate the Vancouver College of Art on the Island; and many theatre groups planned to relocate there.

A significant portion of the Reference Document For Granville Island was devoted to character guidelines. An essential requirement of each development was that it "*create and maintain an environment that will be attractive and will be accessible to people of all ages and incomes. Innovative use of space, particularly the existing industrial buildings was encouraged.*"

The Reference Document became the basis of an agreement between the City of Vancouver and the Island Trust regarding the policies for the redevelopment of Granville Island in 1978. It established a model for development agreements between the city and other, senior levels of government. It was a product of the prevailing desire to cooperate in the attainment of commonly held objectives.

North Shore

Despite the early propoasal by CPR, a plan for the redevelopment of the North Shore was not approved for almost a decade. However, by the time the negotiations were concluded, and the original 1968 proposals severely reduced, CPR decided that it was not economic to develop the site at the approved density and with the numerous amenities required by the City. The city wanted the environmental qualities of the North Shore development to match those on the South Shore but, at this stage, the private sector development industry was not confident of the financial returns to proceed.

3 Implementation

South False Creek

The most important element in the implementation process, was the co-ordinating role performed by the False Creek Development Group. It sustained the strong, active support of politicians and administrators in all levels of government which provided it with direct access to elected officials, concurrent decision making by different government agencies, and the requisite authority delegated by the City. The creation of the Development Group was an innovative solution in Vancouver to the enormous procedural difficulties encountered in the comprehensive redevelopment of an inner city area.

To implement the South Shore plan, the City set up a small, arms-length agency, the False Creek Development Group. With the assistance of City staff it steered the project through all stages of development. Its terms of reference included:

> *"-phased initiation of the planning process including details on a project by project basis;*
>
> *-land negotiation and consolidation;*
>
> *-expediting through the City approval processes;*
>
> *-issuance of proposal calls and recommendation of sponsor groups for assisted housing projects;*
>
> *-land lease and housing design negotiations;*
>
> *-negotiation with CMHC and the Province for financing;*
>
> *-preparation and control of infrastructure financing."*

The primary function of the Development Group was to obtain the participation of and coordinate the involvement of a wide variety of government agencies in three levels of government, the private development sector, and a host of public and special interest organizations.

At the outset the City decided not to construct any of the 17 separate projects Phase I itself. The Development Group was given the task of obtaining sponsors for the assisted housing developments. A single, private developer was commissioned to develop market housing, as well as the construction of the school, community facilities and the areas streets.

The FCDG, along with a coordinating architect and a coordinating developer who were appointed by Vancouver City Council, reviewed each project to ensure quality criteria were met. To meet the social mix criteria established by the Council the group pre-selected residents for the unbuilt community, and involved the future tenants in the planning process.

All levels of Government made significant financial contributions to shaping the social structure and environmental quality of South False Creek through grants, reduced interest rates, written down land costs or other financial assistance. Participation in the project by private sector developers and the enthusiastic acceptance of the environmental goals by the public were also important factors in its success.

Most of the financing for the South Shore was provided by the Federal government through a variety of programs in several ministries. Land assembly and site preparation costs for the first phase were financed by CMHC in a $10 million low-interest loan. A $5 million federal grant was provided to develop and evaluate methods for improving the urban environment. Seawall construction was financed under an unemployment relief program. Dredging and foreshore treatment for the marina was

partially financed by a marina assistance program.

Mortgage financing for market developments was obtained from private sources supported by CMHC guarantees. Mortgage and other financing for the non-market residential components were sought from the Provincial and Federal governments under various housing assistance policies and programs. That the housing assistance programs allowed for a pre-selection of residents was critical to the achievement of population income and age targets. The City wrote down the estimate of the prevailing market land values to make the social housing more viable.

By 1976, Phase 1 of the south shore redevelopment was completed. Using essentially the same process, the remaining phases of the city redevelopment program on the South Shore were completed by 1983.

Today the South Shore contains 1,500 dwelling units, a 6.5 hectare regional park, 6 hectares of local and neighbourhood park, and 10 hectares of other open space and circulation, and an elementary school. Long before it was completed, South False Creek had become highly desirable residential location in downtown Vancouver.

Granville Island

A five member Trust appointed by CMHC in 1976 immediately began preparation of a redevelopment plan for the Island. In many respects the functions of the Trust paralleled those of the False Creek Development Group in the South Shore projects. It assumed the authority to control the character and direction of development; it retained title to the land and negotiated leases with tenants. One of its chief functions was to secure the support and co-operation of other governments and their agencies. Potential jurisdictional conflicts with the City were avoided by incorporating the Trust's Reference Document

into a broad development agreement between the Trust and the City.

In one and a half years a seawall had been built, repaving of roads begun, and sewer and water services upgraded. Although water and sewage services were extensions of the City of Vancouver systems, through a unique agreement the Trust retained title to all property on Granville Island including the roads in which the services were located.

By 1986, 56,100 square meters of space had been redeveloped on Granville Island, almost half of it devoted to retail, entertainment and other uses accessible to the general public. An additional 14,600 square meters remain to be redeveloped to meet the agreed limits of the Reference Document.

The success of Granville Island as an urban amenity area accessible to persons of all ages and incomes has created a problem that was not anticipated at the time of the original proposals - it is an enormously popular place and is often overcrowded.

North Shore

In 1980 the Province of British Columbia became the final government directly involved in the redevelopment of False Creek. The Provincial government involvement came about through a combination of factors including the decision to build a covered stadium and to host a World's Fair on the site. The Province created a Crown development agency, BC Place, and this agency purchased all of the former CPR lands on the North shore of False Creek--70.5 hectares. In addition, it acquired 19 hectares of land owned by other crown corporations, and 12 hectares of waterlots in False Creek.

The planning process for the redevelopment of the North Shore was complicated by a divergence in the political philosophy between the (Provincial) government developer and the local municipality. One of the consequences of this

polarization was the development of active opposition from segments of the city population, as well as City Council, to many of BC Place's activities. There was general agreement on the desirability of redeveloping the site, however, the Province unilaterally proceeded with construction of the stadium and Expo 86 without entering into extended public consultation processes. The spirit and mechanisms of cooperation that had prevailed during redevelopment of the South Shore and Granville Island were not evident.

BC Place was specifically charged with the responsibilities to build and operate a stadium, provide a site for EXPO 86, and direct the redevelopment of the North Shore lands. The crown corporation was directed to operate like a private sector developer and was given the authority to borrow funds that would be guaranteed by the Provincial government. It was expected that BC Place would make a profit.

The Provincial objectives for the redevelopment of the North Shore defined in the early 1980's, tended to deal with the general quality of the development. No specific objectives were set regarding population mix, amenity areas, or community facilities in contrast to the City of Vancouver approach on the South Shore. Improvement of water quality was the only direct environmental goal in this early list. A conceptual land use plan was prepared by BC Place that was intended to serve as a basis for development control by the City of Vancouver.

This plan represented a significant departure from the CPR proposals. Considerable and lengthy debates ensued due to the basic difference between the City of Vancouver aspirations and the BC Place plan.

Much of the disagreement derived from City policies calling for the same levels of amenities, liveability standards, and assisted housing as on the South Shore. The previous means of fulfilling these objectives was no longer possible due to a significant reduction

in Federal and Provincial assisted housing programs that were so critical to the success of social mix objectives on the South Shore.

The original mandate for BC Place was issued in a positive development climate. The economic downturn of the mid 1980's significantly reduced the estimated return to such a point that BC Place could meet neither its original quality criteria, nor the additional costs required to satisfy the City of Vancouver objectives.

Work on site improvements began immediately after BC Place acquired control of the land on the North Shore. The stadium was completed in 1983. As with the development of south False Creek and Granville Island, there was a need to clear the site, design and install roadways and site services, and establish a permanent seawall. On the North Shore, these tasks as well as the construction of the Expo 86 facilities had to be completed by May 1986.

By the end of 1986 BC Place had incurred debts of $90 million for land purchases, $125 million for the stadium, and $60 million for site preparation work. The Expo 86 deficit of $321 million did not appear on the BC Place books, as a separate corporation had been established to manage the worlds fair.

During the course of planning and improving the site on the North Shore, a number of factors coalesced that profoundly affected the potential costs of redeveloping the site -- and which have significant implications for the redevelopment of all former industrial sites.

One factor was the enormous growth in scientific knowledge and technical capabilities concerning the identification, detection and consequences of industrial contaminants. The subsequent attention focused on a few of the world's more seriously contaminated sites assisted in the creation of a highly sensitized public awareness to the problem. When this factor was combined with the environmental awareness that had been growing since the

1960's, it produced a demand, not only to restrict activities that produce such contamination, but to restore already contaminated sites to acceptable, safe standards.

In 1986 BC Place conducted a series of soil tests at several locations on the North Shore site. Analysis revealed a number of major contamination problems existed, the most serious involving widespread deposits of polyaromatic hydrocarbons left by coal gasification plants.

The consequences of these occurrences for the North Shore redevelopment process were significant. In 1968 there were six agencies charged with environmental responsibilities; by 1987 there were 27 agencies requiring environmentally related approvals. Not only did these new requirements produce higher development costs, the necessity of dealing with contaminated soils and water introduced a new magnitude of possible costs.

In 1986 there were changes in both City and Provincial governments. The new Provincial administration launched a major privatization program and in mid 1988 the North Shore site was sold to a private-sector developer and BC Place was dissolved. The developer has prepared yet another concept for the redevelopment of this site and has recently embarked on a process with the City of Vancouver to prepare development plans and regulations for the North Shore.

4 EVALUATION

In terms of meeting the original goals, there is a consensus that both South False Creek and Granville Island were successful. The North Shore redevelopment project is incomplete and it is too soon to fully evaluate this segment of the project.

Physical Environment

The three projects have made substantial improvements to the physical environment. The most evident of these is the improved appearance of the entire Creek basin. It is no longer the site of derelict industrial operations pumping pollution into the atmospheric and marine environments. It is now home to more than 4000 people. More than 20 million visitors came to the False Creek site during Expo 86 and a legacy in the form of a science centre is nearing completion. A covered stadium has been in operation for five years. A permanent seawall has been established along more than three quarters of the shoreline, and a waterfront walkway gives public access to most of the Creek. Major improvements to the water quality have occurred. This has resulted from both the removal of industrial uses which were contributing pollutants to the water, and from the provision of new sewage services for the redevelopment projects. Three-fourths of the combined storm and sanitary sewer outfalls that emptied into the Creek have been separated and sanitary sewage no longer enters the Creek through the new developments.

No comprehensive impact analysis of the physical environment of the Creek has been yet undertaken. It was only in the mid-1980's, with the North Shore development, that an inventory on the marine environment was undertaken.

Residential development in the Creek was subject to transportation generated noise from the bridges, nearby arterial roadways and rail lines. These sources still remain although significant measures have been taken to reduce the impact of noise on residential liveability. Chief among these measures was a berm built along the southern boundary of the South Shore development. Although this solution has succeeded in reducing noise in the residential areas, it separated the development from the rest of City.

During the servicing of the North Shore, industrial contaminants were discovered in the soils and the sediment of the Creek bed. The exact nature of these contaminants has not been determined, nor has a program been defined by the regulatory authorities to deal with them. Knowledge of and the ability to detect contaminants was unsophisticated during the redevelopment of the South Shore and Granville Island sites. The procedures and standards of today did not apply to those areas. The outcome of the ongoing policy formulation program will have an impact far beyond the site as the contributing industries were so common in industrial countries. In many respects the site has become a laboratory for the development of policies and procedures to deal with industrial contamination.

Social Environment

A major benefit of the Granville Island and South False Creek projects has been improved social equity within the City of Vancouver. This is due to the extensive public areas and the carefully controlled character of accessible public developments. It is particularly true of the residential areas because there was a deliberate program to ensure that all income ranges and ages were proportionately represented, and where public spaces and amenities were provided at a high level.

The innovative implementation methods utilized by the False Creek Development Group in meeting the social mix objectives appear to have been successful. The targets were intended to improve social equity providing assisted housing. In the only evaluation of the social mix in South False Creek undertaken to date, the findings indicated that the specific targets were met. This evaluation concluded by stating that the development should have been built at a higher density so that more people could avail themselves of the amenities that were incorporated into it. The report goes on to say that higher density would have been

to say that higher density would have been achieved at no expense to liveability.

Economic Environment

These benefits may be in the form of additional investment, encouraged redevelopment of adjacent areas, or direct and indirect tax revenues.

All three projects were based on the premise that public investment in planning, land development and managing the redevelopment of the basin would attract private sector investment to the site and adjacent areas. Estimates of the ratio of additional investment to the original public investment in completed developments of False Creek has ranged from a low of 3:1, to a high of 7:1, a significant positive economic impact that may be expected in other similar situations.

The catalytic effect of a large public sector development on adjacent areas was evident in False Creek. Benefits of this sort could continue for many years.

Increases in property tax revenue was one of the original justifications for the redevelopment of the Creek and has taken place. For instance, with less than 10 percent of the proposed redevelopment of the North Shore complete, property tax revenue has increased by more than 100 percent.

Any cost benefit evaluation of the False Creek developments is necessarily subjective. It is known that the original $20 million investment in the South Shore of False Creek was also accompanied by an investment of over $135 million in private-sector projects. The unemployment relief programs used so effectively on the South Shore were an innovative use of program funds that contributed to the benefit of a wider population. The construction of BC Place Stadium, servicing the North Shore site, and much of the Expo 86 construction occurred when

unemployment in the construction industry was high.

Public/Private Partnerships

The three False Creek projects were based on the concept of a public/private partnership. A a government agency acted as the land developer, responsible for assembling, clearing, servicing, and obtaining planning approvals for the site. In addition to land development responsibilities, the development agencies provided certain amenities related to specific public objectives.

Various methods were used by the development agency to involve the private sector: ground leases on the South Shore, building and ground leases on Granville Island, and sale of land on the North Shore. In all cases the private sector perceived the amenitites provided by the government as beneficial to their participation.

The planning co-ordination role was critical to the success of the Granville Island and South Shore projects but did not have the opportunity to mature on the North Shore. With the privatization of the North Shore, the partnership relationships that were central to the success of the other projects may cease to exist and the private developer will have a more difficult, and costly task in meeting his objectives.

5 TRANSFERABILITY OF EXPERIENCE

Two of the three redevelopment projects of False Creek are virtually complete, the third has just undergone a transfer to private ownership. The experience that can be gained from a review of these projects is summarised below.

Site Control

It is readily apparent that the three redevelopment projects in False Creek could not have succeeded as proposed under fragmented ownership. Single ownership facilitates such development activities as: site clearance, preparation of a comprehensive area plan, rationalization of servicing, project image development, the combined provision of community amenities and, if sufficiently large, promotes the sense of a community identity. The incomplete redevelopment of Fairview Slopes that began following the South False Creek initiative, illustrates this point for this area contains no community amenities.

There is no evidence that False Creek could not have been redeveloped by the private sector. However, the mandates for the three projects included a number of public objectives that would not have been included in a private sector development. Public ownership was a necessary condition to the achievement of these public goals, for it was inconceivable at the time that any private developer would build a stadium, initiate assisted housing or forgo certain revenue to maintain a public amenity. Indeed, the original proposal by CPR for the North Shore site, was a standard development proposal of its era although it contained few of the amenities that were eventually provided.

On the North Shore, after the first two elements of the project's mandate were completed and substantial progress towards redevelopment made, the site was sold to a single private developer. The public objectives for South False Creek and Granville Island, required ongoing participation of the government operational agency. The decision to only lease development parcels or buildings to the private developer, gave the agencies greater control, and ensures the objectives are maintained.

Project Scale

All three projects discussed were perceived as major initiatives in the Vancouver context. Each was widely perceived to have the potential of exerting a major influence on the status quo. Consequently, they provoked a great deal of public interest. When the public was permitted and encouraged to participate in the planning process, there is no doubt they contributed to the success of the projects. When this interest is excluded from the process it can be detrimental to the development.

A lengthy time frame was required for each of the projects to be realized and during the time of development there were significant changes in the economic and political climates. Each of the projects had to weather these changes and was able to do so only to the extent the original premises of the project enjoyed popular support.

A lengthy time frame also requires a patient investor, as returns from the original investment may not be fully realized until the project is well established. The spin-off development benefits that occur in the adjacent communities is only now beginning to be evident. The social benefits from the redevelopment projects will remain for years to come.

Commitment

Government development agencies are required to make lasting commitments particularly where social and environmental goals are emphasised. These commitments will likely take the form of continuing investment and management.

A government developer, like a private developer, must be prepared to accept the risks associated with real estate ventures. Particularly with respect to long term projects, the accuracy of early forecasts of expenditures and revenues will be altered with changing economic cycles. With a public

developer such as those in False Creek, objectives are frequently different from the normal objectives of profit oriented private developers, and may require an even greater commitment.

One example of this is Granville Island, where the objectives are ongoing. Today the Granville Island team screens replacement tenants and existing leaseholders to ensure the established character of the Island is maintained. It is no longer necessary to try and create an image and character by a judicious mix, but rather ensure an ongoing success. The task of management is now an operational rather than a developmental function.

The original commitment was to a level of environmental improvement dealing only with visual pollution and water quality, however, improved technology and revised standards indicated a much higher level of investment in environmental improvement was called for. The success of the initial redevelopments and the subsequent private investment in the adjacent areas appears to have produced economic and social returns that justify the increased expenditure.

Flexibility

In the urban development industry a certain amount of "freewheeling" or the use innovative procedures is a prerequisite for success. Each development presents its unique set of problems and situations and they must be resolved. This also holds true for government sponsored redevelopment programs. The agencies responsible for South False Creek and Granville Island were able to develop flexible planning and implementation procedures that adapted to the individual needs of a particular tenant as long as the original goals of the project were satisfied. This freedom of operation was also evident at BC Place during its short lifespan.

Although they were government agencies, the developers of False Creek operated with an unusual amount of autonomy and enjoyed direct access to political leaders. This created a decision making process that allowed a flexible response to both changing market conditions and evolving public objectives.

Intergovernmental Relations

The success of Canadian urban redevelopment projects with public objectives requires cooperation among various levels of government as well as between departments within a government. The resolution of jurisdictional disputes and sharing of responsibilities can only be attained through a cooperative process. In False Creek this cooperation derived from a public consensus that placed a high value on Creek-wide redevelopment.

Redevelopment of central urban industrial sites requires a more complex approval process than conventional development sites. While this situation complicates the approval process it may also provide advantages--as was found in the South Shore where a variety of government funding projects were brought to bear on the project.

Environmental Standards

In the Canadian context, growing public demands for higher environmental standards, combined with an expanding monitoring and assessment technology, has led to increased regulation. The twenty-year time frame required to complete just over half of the redevelopment of the basin has seen the environmental considerations extend far beyond the original aesthetic and water quality concerns. The implication for the future is that environmental quality will become more important in the development process.

Developers of former industrial sites should be aware that these sites are likely to contain an unwanted, and in some cases an unknown, legacy of their former uses. Remediation of these legacies may require significant resources that cannot be accurately predicted.

Conclusion

Although the False Creek redevelopment program was initiated as an early environmental improvement project it was apparent from the outset that there would be significant economic benefits from the redevelopment. The benefits of a comprehensive Creek-wide program are manifest and impossible to quantify. The success of the completed False Creek redevelopment projects suggests that environmental improvement can provide economic benefits.

APPENDIX I

HOUSING PROGRAMS USED IN FALSE CREEK 1970-1980

I Programs for Market Housing

A. OWNER OCCUPIED

1. Federal Programs

Assisted Home Ownership (AHOP)

Outright grant and interest reduced loan

Graduated Payment Mortgage

Insured Loan Program

Residential Rehabilitation Assistance (RRAP)

Canadian Home Insulation Program (CHIP)

Municipal Incentive Grants

2. Provincial Programs

Housing Initiatives: low interest mortgages

Supplemental AHOP subsidy

Home Purchase Assistance Act

Homeowner's Grant

Home Conversion Loan

Low interest mortgages

B. Renter Occupied

1 Federal Programs

Rent Supplement Program: operating subsidy to Landlord

Assisted Rental Program (NRP): per unit subsidies and loans

Multiple Unit Residential Building (MURB): capital cost allowance

Municipial Incentive Grants

2. Provincial Programs

Housing Initiative Program

Low interest mortgages

Renter's Tax Credit

Rent Control

Shelter Aid for Elderly renters (SAFER): direct cash grant

Home Conversion Loan

Low interest mortgages

IIASSISTED HOUSING PROGRAMS 1970 - 1980

A. Owner Occupied

1. Federal Programs

Cooperative Housing

Start up funds.

MIG

2. Provincial Programs

High impact grants (MIG).

Joint Coop.

3. MUNICIPAL PROGRAMS

Coop Housing.

Land Servicing.

Land cost write-downs.

B. Renter Occupied

1. Federal Programs

ARP

Public Housing.

Limited Dividend Housing: interest rate reduction loan.

Student Housing Program.

Muncipal Incentive Grants

2. Provincial Programs

Public Image

3. Municpal Programs

Public Housing (GVHC)

APPENDIX II

BIBLIOGRAPHY

1.City of Vancouver Publications and Reports

FALSE CREEK REHABILITATION REPORT, February, 1964

FALSE CREEK POLICIES, November 1973

FALSE CREEK THREE DESIGN CONCEPTS, May, 1974

OFFICIAL DEVELOPMENT PLAN FOR FALSE CREEK, June, 1974

INNER CITY LIVING - THE FALSE CREEK DEVELOPMENT PROGRAM, 1975

BROADSHEET FOR PUBLIC MEETING: THE REDEVELOPMENT OF GRANVILLE ISLAND IN FALSE CREEK, VANCOUVER, 1977

REPORT TO COUNCIL: REFERENCE DOCUMENT FOR GRANVILLE ISLAND - FALSE CREEK - AREA 9, 1978

BCPED POLICIES, . February, 1981

QUARTERLY REVIEW, FALSE CREEK SOUTH SHORE: TEN YEARS AFTER, October, 1984

FALSE CREEK WATER BODY STUDY, August, 1985

QUARTERLY REVIEW, GRANVILLE ISLAND, January, 1986

REPORT TO COUNCIL: NORTH PARK NON-MARKET HOUSING, April, 1986

COMMUNITY PATTERNS IN POLICY 1972 - 1987 (EXTRACT), February, 1988

FALSE CREEK POLICY BROADSHEETS - A DISCUSSION DOCUMENT, April, 1988

2.FALSE CREEK STUDY GROUP